

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/FR2004/000744

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 C12N15/10 C12N9/10 A61K38/45

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EMBASE, EPO-Internal, BIOSIS, CHEM ABS Data, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/083892 A (MARLIERE PHILIPPE ;POCHET SYLVIE (FR); BOUZON MADELEINE (FR); CENT) 24 October 2002 (2002-10-24) claims 1-6,11	13,24
Y	---	1-12,14, 21-23
Y	WO 03/025163 A (KAMINSKI PIERRE-ALEXANDRE ;MARLIERE PHILIPPE (FR); COTAYA RACHEL () 27 March 2003 (2003-03-27) page 1 -page 3; claims 1-37 ---	1-12,14, 21-23

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## ° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the International search

22 September 2004

Date of mailing of the International search report

15/10/2004

Name and mailing address of the ISA

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PCT/FR2004/000744

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WANG XING-GUO ET AL: "Conversion of a glutamate dehydrogenase into methionine/norleucine dehydrogenase by site-directed mutagenesis"          EUROPEAN JOURNAL OF BIOCHEMISTRY, vol. 268, no. 22, November 2001 (2001-11), pages 5791-5799, XP002262490          ISSN: 0014-2956          abstract</p> <p>---</p>	13
P, Y	<p>DATABASE BIOSIS 'Online!          BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 2003          CHANG H K ET AL: "Directed evolution of Comamonas testosteroni GZ39 m-hydroxybenzoate hydroxylase for the synthesis of 4-substituted catechols." Database accession no. PREV200300546363 XP002297541          abstract</p> <p>&amp; ABSTRACTS OF THE GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, vol. 103, 2003, pages 0-114 URL, 103RD AMERICAN SOCIETY FOR MICROBIOLOGY GENERAL MEETING; WASHINGTON, DC, USA; MAY 18-22, 2003          ISSN: 1060-2011</p> <p>---</p>	1-12, 14, 21-23
Y	<p>WAN LIANGLU ET AL: "In vitro evolution of horse heart myoglobin to increase peroxidase activity"          PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol. 95, no. 22, 27 October 1998 (1998-10-27), pages 12825-12831, XP002297538          ISSN: 0027-8424          abstract</p> <p>---</p>	1-12, 14, 21-23
Y	<p>DATABASE EMBASE 'Online!          ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL; 1991          CHEN K ET AL: "Enzyme engineering for nonaqueous solvents: Random mutagenesis to enhance activity of subtilisin E in polar organic media"          Database accession no. EMB-1992050285 XP002297542          abstract</p> <p>&amp; BIO/TECHNOLOGY 1991 UNITED STATES, vol. 9, no. 11, 1991, pages 1073-1077, ISSN: 0733-222X</p> <p>---</p>	1-12, 14, 21-23
		-/-

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>CARSON D A ET AL: "SYNTHESIS OF 2', 3'-DIDEOXYNUCLEOSIDES BY ENZYMATIC TRANSGLYCOSYLATION"            BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS INC.            ORLANDO, FL, US,            vol. 155, no. 2,            15 September 1988 (1988-09-15), pages 829-834, XP002044161            ISSN: 0006-291X            abstract</p> <p>---</p>	1-12,14, 21-23
Y	<p>HUANG M-C ET AL: "ANALOGS OF 2'-DEOXYADENOSINE: FACILE ENZYMATIC PREPARATION AND GROWTH INHIBITORY EFFECTS ON HUMAN CELL LINES"            BIOCHEMICAL PHARMACOLOGY,            vol. 30, no. 19, 1981, pages 2663-2671,            XP002297539            ISSN: 0006-2952            abstract</p> <p>---</p>	1-12,14, 21-23
Y	<p>FREEMAN G A ET AL:            "2-amino-9-(3-azido-2,3-dideoxy-beta-D-erythro-pentofuranosyl)-6-substituted-9H-purines: synthesis and anti-HIV activity."            BIOORGANIC &amp; MEDICINAL CHEMISTRY. APR 1995,            vol. 3, no. 4, April 1995 (1995-04), pages 447-458, XP002297540            ISSN: 0968-0896            page 447</p> <p>---</p>	1-12,14, 21-23
A	<p>SHORT STEVEN A ET AL: "Active site amino acids that participate in the catalytic mechanism of nucleoside 2'-deoxyribosyltransferase"            JOURNAL OF BIOLOGICAL CHEMISTRY,            vol. 271, no. 9, 1996, pages 4978-4987,            XP002262491            ISSN: 0021-9258</p> <p>-----</p>	

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No  
PCT/FR2004/000744

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO 02083892	A 24-10-2002	FR	2823219 A1	11-10-2002
		CA	2444026 A1	24-10-2002
		EP	1383890 A2	28-01-2004
		WO	02083892 A2	24-10-2002
WO 03025163	A 27-03-2003	FR	2829774 A1	21-03-2003
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		WO	03025163 A2	27-03-2003